

RGP-0062

MAR 30 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Price et al)	
Serial No.:	09/916,116)	Group Art Unit: 1771
Filed:	July 26, 2002)	
For:	COMPRESSIBLE FOAM TAPES AND METHOD OF MANUFACTURE THEREOF)	Examiner: V. Chang

THIRD DECLARATION
PURSUANT TO 37 C.F.R. § 1.132

Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Brett W. Kilhenny declare as follows:

1. I am a co-inventor of the above-referenced patent application, (the " '116 application"). I am currently an employee of Rogers Corporation, which wholly owns World Properties, Inc., the current assignee of the '116 application.

2. I have read and understood the '116 application and the Office Action dated September 30, 2005. I have further read and understood U.S. Patent No. 3,839,087 to Birchall et al. ("Birchall").

3. Flexography tapes for flexographic printing generally comprise a reinforcing film (for example polyethyleneterephthalate (PET)) adhered to a foam. A first adhesive on one side of the foam is used to adhere the tape to the printing cylinder, and a second adhesive on one side of the reinforcing film is used to adhere the tape to the printing plate. It has been

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found that when a polyurethane foam is used, the tape is not cleanly removable from the printing cylinder and/or plate. Clean removal of the tape is achieved by providing an additional polymer ("anchor") layer between the foam and the reinforcing layer.

4. However, the Examiner has stated that "in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to modify Applicants' admitted prior art by incorporating a commonly practiced anchor layer of isocyanate-ended polyurethane or vinylidene chloride-alkyl acrylate copolymer between the reinforcing PET film substrate and the polyurethane foam layer motivated by the desire to obtain a strong adhesion between the polyurethane and PET layers." (9/30/05 Office Action, p. 5, lines 8-14).

5. Five different samples were prepared, to compare the effect of different polymer layers when used with a poly(ethylene terephthalate) (PET) reinforcing layer. A layer of polyurethane foam as described in the '116 application was accordingly cast onto five sample reinforcing layers, as follows:

Sample #1 (Control) - 2-mil PET reinforcing layer; no polymer layer.

Sample #2 (Experimental) - 1.2-mil composite reinforcing film comprising a PET layer co-extruded with a copolyester polymer layer. The foam layer is cast onto the copolyester polymer surface of the composite reinforcing film.

Sample #3 (Comparative) - 1.2-mil composite reinforcing film comprising a PET layer co-extruded with a copolyester polymer layer. The foam layer is cast onto the PET surface of the composite reinforcing film.

Sample #4 (Comparative) - A 1.2-mil thick layer of a low crosslink density, isocyanate-terminated polyurethane ("polyurethane A") was coated onto a 2-mil PET reinforcing layer, and cured for 5 minutes at 150°C, to provide a coating about 1 mil thick. The polyurethane foam was cast onto the cured layer of polyurethane A, and then cured.

Sample #5 (Comparative) - A 1.2-mil thick layer of a higher crosslink density, isocyanate-terminated polyurethane ("polyurethane B") was coated onto a 2-mil PET

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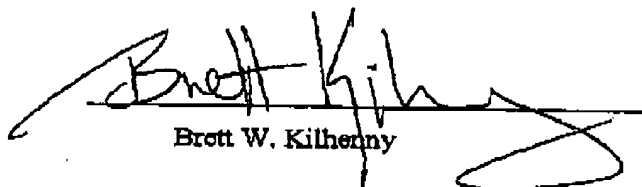
reinforcing layer, and cured for 5 minutes at 150°C, to provide a coating about 1 mil thick. The polyurethane foam was cast onto the cured layer of polyurethane B, and then cured.

6. Each of the five samples was rubbed with a pencil eraser. In Sample # 2, which is accordance with the present claims, there was no delamination of the PET reinforcing layer, and no separation of foam layer from the composite reinforcing layer. In all of the other sample films, the foam layer readily separated from the PET reinforcing layer when rubbed with a pencil eraser. (The exact mechanism of this separation was not determined.) Thus, contrary to the teachings set forth in Birchall, use of an isocyanate-terminated polyurethane fails to increase the adhesion of the polyurethane foam to the reinforcing layer.

7. It can therefore be concluded that the flexographic printing tape as presently claimed provides unexpectedly superior results in preventing separation of the foam layer from the PET reinforcing layer compared to the anchor layers of the prior art.

8. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent resulting therefrom.

Date: 3/30/2006


Brett W. Kilhenny